

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Ferri et al.	§	Group Art Unit: 2433
	§	
Serial No. 10/718,064	§	Examiner: Tran, Ellen C.
	§	
Filed: November 20, 2003	§	Customer No.: 50170
	§	
For: Method of Authenticating	§	
Digitally Encoded Products	§	
Without Private Key Sharing	§	

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

ATTENTION: Board of Patent Appeals and Interferences

APPELLANTS' REPLY BRIEF (37 C.F.R. § 41.41)

This Reply Brief is in response to the Examiner's Answer mailed May 18, 2009.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447.

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None.

III. Statement of Additional Facts

None.

IV. Argument

A. Response to Examiner's Remarks Regarding Rejection under 35 U.S.C. § 103(a), Claims 22, 23, 25, 28, 31, and 32

This is a reply to the Examiner's Answer mailed May 18, 2009.

On page 8, lines 7-10 of the Examiner's Answer, the Examiner states:

The Examiner disagrees the agent of the Bhagavatula teaches that both the user and vendor are authenticated. Users using the agent system in Bhagavatula are requesting that all vendors that they interact with through the system are authenticated. Therefore the

users request for a product through the agent system is equivalent to 'a request of authentication of the product'.

In response, Appellants respectfully submit that Bhagavatula teaches that users are authenticated in Figure 2 and the associated description in column 4, line 62, to column 6, line 24. In this Figure and associated section, Bhagavatula describes that a user registration process is administered by an authenticating agent. The user visits the authenticating agent and submits user registration data. Prior to accepting the new user, the user is evaluated by the authentication agent. The authentication agent evaluates the user's identity from the registration data and determines the user's qualifications for participation. Upon completion of the evaluation process, the authentication agent decides if the potential new user has passed or failed the evaluation. If the user has failed the evaluation, they are so notified. If the user passes the evaluation, then an appropriate user account is opened and the user notified of the outcome.

Also in response, Appellants respectfully submit that Bhagavatula teaches that vendors are authenticated in Figure 3 and the associated description in column 6, line 25, to column 8, line 31. In this Figure and associated section, Bhagavatula describes that a vendor registration process is administered by the authentication agent. Bhagavatula describes that the vendor registration process is similar to the

user registration process. The authentication agent provides an interested vendor with a vendor registration page which is used to capture or otherwise retrieve vendor data. The authentication agent evaluates the vendor to determine compatibility of the vendor's practices with the system A. For example, Bhagavatula describes determining if the vendor maintains suitably reliable records of interest to users. Additionally, the vendor's general business practices may be evaluated and their participation denied to insulate users from vendors with poor customer relations/satisfaction or other potentially undesirable traits. Upon completion of the evaluation process, the agent decides if the potential new vendor has passed or failed the evaluation. If the vendor has failed the evaluation, they are so notified. If the vendor passes the evaluation, then an appropriate vendor account is opened and the vendor notified of the outcome

In the case of both users and vendors, if approved and participation is still desired, the user or vendor optionally supplies the agent, along with an indication of acceptance, additional account creation data. In the case of the user 40 the addition account creation data optionally includes, e.g., a secret personal identification number (PIN), the answers to a number of designated or otherwise selected security questions, designated limits or restrictions on the use of the account, etc. In the case of the vendor 30, once the vendor has accepted, the agent forwards a participation kit to the vendor enabling the vendor to participate

in the centralized authentication system A. The participation kit outlines the rights and responsibilities or duties of the vendor with respect to their participation in system A. Optionally, the kit includes a participation agreement and a software object for installation on the vendor's server. After the vendor signs the agreement physically, electronically or otherwise, it is returned to the authentication agent.

Thus, as evident from the teachings of Bhagavatula, Bhagavatula merely describes that the user and the vendor are being authenticated by an authentication agent, Bhagavatula fails to describe that a transmission of a request being sent by the client system (i.e., the user) to authenticate a product that was originated by the entity (i.e. the vendor). In Bhagavatula, the user and the vendor have to be authenticated prior to accessing the data. If the user and the vendor are authenticated, then the agent merely retrieves the information or data requested by the user from the respective vendors and forwards the data back to the user. Nowhere in these sections, or in any other section of Bhagavatula, is there a teaching of a client system transmitting a request of authentication of the product to a server system.

On page 8, line 14, to page 9, line 4 of the Examiner's Answer, the Examiner states:

The Examiner disagrees with the argument for multiple reasons. One as pointed out in the Final Office action the 112

rejection that was placed on the claims because the language does not clearly define the term "entity", is removed however the Examiner interprets the term 'entity' to be in reference to the user. That is why the sections detailing user authentication are pointed to in the rejection. In addition although the claim language is not clear, who is the entity the client, the server system, or someone else (i.e. the vendor), Bhagavatula teaches that the vendor's are authenticated using similar steps as the users in col. 6, lines 25-46. Therefore it is understood that the vendors, i.e. the entity are authenticated using sensitive information.

In response, Appellants respectfully submit that one of ordinary skill in the art would easily identify the entity in the present claims to be equivalent to the vendor as opposed to the Examiner's interpretation. That is, if one were to use the Examiner's interpretation that the entity is the user of Bhagavatula, then there would be no need for the client system, which the Examiner has recognized as the user, to transmit a request of authentication of the product to a server system. Especially since the claims specifically states that the product is a digitally encoded product being originated by the entity. However, if the entity is, for example a vendor, then it would make sense to one of ordinary skill in the art for the client system to transmit a request of authentication of the product to a server system. While Appellants agree that the vendors are authenticated by the

Bhagavatula system, Appellants respectfully submit that Bhagavatula provides no teaching whatsoever of certifying that the product originates from the entity using sensitive information of the entity stored on the server system. That is, as described above and in Appellants' Brief, once that authentication agent of Bhagavatula certifies the user and vendor for access to the system, nowhere is there any teaching that data transmitted between the user and the vendor is authenticated.

On page 9, lines 7-9 of the Examiner's Answer, the Examiner states:

The Examiner disagrees with the argument as noted in the Final Office action the page returned by the agent to the user is interpreted equivalent to the representation of the certification to the client system, see col. 8, lines 32-67.

In response, Appellants respectfully that the Examiner only cited column 8, lines 54-67 as teaching the feature of returning a representation of the certification to the client system (see Final Office Action page 5, section 5, lines 7-8).

Nonetheless, using the originally cited section of the expanded section cited in the Examiner's Answer, in the cited section, Bhagavatula describes a request processing procedure that begins with the user requesting a page with a directory listing registered vendors that participate in the centralized authentication system

A. The user is then free to select the registered vendor or vendors of his choice

from the directory. After selecting a vendor, the authentication agent provides the user with an information or data selection page from which the user selects the information or data desired from the chosen vendor. Upon completion of the data selection page, the authentication agent retrieves the requested information from the selected vendor and forwards it to the user. However, nowhere after receiving the page, does the user transmit a request of authentication of the product to a server system and nowhere is there a certification that the product originates from the vendor performed using sensitive information of the vendor stored on the server system. Therefore, Appellants respectfully submit that Bhagavatula could not return a representation of the certification to the client system.

On page 9, lines 15-18 of the Examiner's Answer, the Examiner states:

The Examiner disagrees with the argument also as discussed above the Bhagavatula teaches that the vendor's are authenticated using similar steps as the users in col. 6, lines 25-46. Therefore it is understood the products and or services such as access to data in a user account held by databases on the vendor system see col. 1, lines 38-49 is authenticated.

In response, Appellants respectfully submit that one of ordinary skill in the art would not understand that a product provided by a vendor originates from the vendor. That is, for example, Best Buy, a nationally known vendor, provides

products to users. However, Best Buy is not the originating vendor of most if not all of the products Best Buy sells. Therefore, if a user were to send a request to Best Buy to certify that the product (for example, Microsoft Office[®]) originated from Best Buy, Best Buy could not provide such a certification of the Microsoft Office[®] product. Thus, merely being authenticated as a vendor does not provide for all products and services such as access to data in a user account held by databases actually originate from the vendor.

Furthermore, this allegation made by the Examiner clearly supports Appellants argument that one of ordinary skill in the art would recognize that the term “entity” as used in the claims clearly would be understood to be the vendor of the product.

On page 10, line 7 of the Examiner’s Answer, the Examiner states:

The Examiner disagrees with the argument Bhagavatula teaches the invention as shown above.

In response, Appellants respectfully submit that Bhagavatula does not teach or provide a sound technical reason why the needed changes to reach the presently claimed invention are necessary, since Bhagavatula fails to perform any authentication of data that is sent between the user and the vendor. Again, Bhagavatula merely authenticates the user and the vendor. After that verification,

Bhagavatula fails to provide for a client system transmitting a request of authentication of the product to a server system and a server system verifying whether the request is received from an authorized subject, and responsive to a positive verification by certifying that the product originates from the entity using sensitive information of the entity stored on the server system, and returning a representation of the certification to the client system. Absent the Office Action pointing out some teaching or incentive to implement Bhagavatula such that a client system transmits a request of **authentication of the product** to a server system, the server system certifies that the product originates **from an entity** using sensitive information of the entity stored on the server system, and the server system returns a representation of the certification to the client system, as recited in independent claim 1, one of ordinary skill in the art would not be led to modify Bhagavatula to reach the present invention when the reference is examined as a whole. Absent some teaching or technical rational to modify Bhagavatula in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the Appellants' disclosure as a template to make the necessary changes to reach the claimed invention.

For the reasons given in this Reply Brief and in the Appeal Brief, reversal of the Examiner's rejection is respectfully requested.

**B. Response to Examiner's Remarks Regarding Rejection under 35
U.S.C. § 103(a), Claims 4-8**

On page 10, lines 10-11 of the Examiner's Answer, the Examiner states:

The Examiner disagrees with the argument there are no deficiencies in Bhagavatula to the claimed subject matter.

In response, Appellants respectfully submit that the argument presented in the Appeal Brief on pages 16-17, was that Graves does not provide for the deficiencies of Bhagavatula. In view of the above and the reasons given in the Appeal Brief, Applicants respectfully submit that Bhagavatula and Graves, taken alone or in combination, do not teach or provide a technical reason for transmitting from a client system a request of **authentication of the product** to a server system, certifying by a server system that the product originates from the entity using sensitive information of the entity stored on the server system, and returning by a server system a representation of the certification to the client system. Bhagavatula merely **authenticates the user** to ensure the user is registered and is in fact who he claims to be. Nowhere in this section, or in any other section of Bhagavatula, is there a teaching of a client system transmitting a request of **authentication of the product** to a server system. Thus, Appellants respectfully submit there is a deficiency in Bhagavatula in that Bhagavatula fails

to teach or provide a technical reason for a client system to transmit a request of **authentication of the product** to a server system, certifying that **the product** originates from the entity using sensitive information of the entity stored on the server system, and returning a representation of the **certification** to the client system. Therefore, Bhagavatula is deficient.

1. **Claim 4**

On page 11, lines 1-4 and 13-16, which are exact duplicate comments, of the Examiner's Answer, the Examiner states:

The Examiner disagrees with the argument. As noted above Bhagavatula teaches that the products are authenticated by a 'server system' i.e. agent. Graves was combined with Bhagavatula to teach that the private keys can be retrieved for an entity from multiple systems. The storing of private keys is well taught in the Graves reference in the paragraphs cited.

In response, Appellants respectfully submit that Bhagavatula merely authenticates users and vendors to use the Bhagavatula system. As discussed above, once the users and vendors are authenticated, Bhagavatula fails to perform any authentication of data that is sent between the user and the vendor. Appellants respectfully submit that simply integrating a Personal Trust Agent (PTA) and authentication and retrieving a key does not teach or provide a technical reason for automatically retrieving a private key of the entity, **from which the product**

originates, which is stored on the server system, and digitally signing **the product** using the private key. Again, Graves merely **authenticates whether a user is authorized to use the payment instrument**. The certificate does not certify **that the product originates from an entity** using sensitive information of the entity stored on the server system.

2. Claim 7

On page 12, lines 11-14 of the Examiner's Answer, the Examiner states:

The reference teaches the claimed limitation. Bhagavatula and Graves teaches authenticating entities, user and vendor. The Graves references teaches in paragraph 53, by 'clicking button' which is equivalent to the "invoking a remote command. The server system executes the authentication command which attaches the digital signature.

In response, Appellants respectfully submit that even though Bhagavatula authenticates users and vendors, Bhagavatula fails to perform any authentication of data that is sent between the user and the vendor and as shown above it is not inherent that product supplied by a vendor actually originate from the vendor. Graves is directed to authenticating whether a user is authorized to use a payment instrument. Appellants respectfully submit that Grave's private key, **of the buyer**, that is used for authentication and digital signature, **of the buyer**, is not equivalent to the client system invoking a remote command on the server system, the server

system verifying whether the remote command is included in a predefined list stored on the server system, the list including at least one remote command for satisfying the request of authentication, **of the product**, and the server system executing the remote command if included in the list.

On page 13, lines 4-8 of the Examiner's Answer, the Examiner states:

The Examiner disagrees with argument for multiple reasons. One the limitations are clearly taught in the combination of references. Bhagavatula teaches authenticating the user as well as the vendor. Two Graves is utilized because it teaches a server system with the use of private keys for authentication purposes. In addition Graves teaches the private keys can be stored elsewhere. As well as the server system can be commanded to perform authentication functions.

In response, Appellants respectfully submit that, as shown above, Bhagavatula and Graves do not "clearly" teach the above limitations. Moreover, Bhagavatula and Graves, taken alone or in combination, fail to teach or provide a technical reason for a client system transmitting a request of authentication of the product to a server system, certifying that the product originates from the entity using sensitive information of the entity stored on the server system, and returning a representation of the certification to the client system. That is, even though Bhagavatula authenticates users and vendors and Graves authenticates whether a

user is authorized to use a payment instrument, neither Bhagavatula nor Graves, teach or provide a technical reason to transmit a request of authentication of the product to a server system, certify that the product originates from the entity using sensitive information of the entity stored on the server system, and return a representation of the certification to the client system.

3. **Claim 8**

On page 13, lines 11-12 of the Examiner's Answer, the Examiner states:

The Examiner states there are not deficiencies, the combination teaches all the limitations presented.

In response, Appellants note that the Examiner did not address any of the arguments with regard to the features of claim 8. Further, Appellants respectfully submit that in view of the above and the reasons given in the Appeal Brief, Applicants respectfully submit that Bhagavatula and Graves, taken alone or in combination, do not teach or provide a technical reason for transmitting from a client system a request of **authentication of the product** to a server system, certifying by a server system that the product originates from the entity using sensitive information of the entity stored on the server system, and returning by a server system a representation of the certification to the client system. Bhagavatula merely authenticates the user or vendor to ensure the user or vendor

is registered and is in fact who he claims to be and Graves merely describes authenticating whether a user is authorized to use the payment instrument. Neither reference teaches or provides a technical reason for a client system transmitting a request of **authentication of the product** to a server system, certifying that the product originates from the entity using sensitive information of the entity stored on the server system, and returning a representation of the certification to the client system. Thus, Appellants respectfully submit there is a deficiency in Bhagavatula and Graves in that Bhagavatula and Graves fail to teach or provide a technical reason for a client system to transmit a request of **authentication of the product** to a server system, certifying that **the product** originates from the entity using sensitive information of the entity stored on the server system, and returning a representation of the **certification** to the client system. Therefore, Bhagavatula and Graves are deficient.

For the reasons given in this Reply Brief and in the Appeal Brief, reversal of the Examiner's rejection is respectfully requested.

C. Conclusion

In view of the above, Appellants respectfully submit that claims 1-8 of the present application are directed to statutory subject matter and that the features of these claims are not taught or technically reasoned by the 1-8 references.

Accordingly, Appellants request that the Board of Patent Appeals and Interferences overturn the rejections set forth in the Final Office Action.

Respectfully submitted,

A handwritten signature in cursive script, reading "Francis Lammes", written over a horizontal line.

Francis Lammes

Reg. No. 55,353

Walders Intellectual Property Law, P.C.

17330 Preston Road, Suite 100B

Dallas, TX 75252

Phone: (972) 380-9475

Fax: (972) 733-1575

Email: lammes@walderiplaw.com

AGENT FOR APPELLANTS